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Mountain Whitefish
Prosopium williamsoni

Range:
Occurs only in the lakes and streams of western North America from the Lahontan basin in Nevada, north to the Yukon-British Columbia border (Scott and Crossman 1973).

Washington Distribution:
Found throughout Washington's lakes, rivers, and streams.

Habitat Requirements:
In streams, juvenile and adult mountain whitefish are found primarily in pools and riffles in summer, and in large pools in winter. Spawning generally occurs in late October and early November in gravel of stream riffles and on gravel shoals along lake shores. Newly hatched fry are found in stream and lake shallows for a few weeks after hatching in the early spring before migrating offshore (Scott and Crossman 1973). Adult mountain whitefish feed primarily on immature forms of bottom dwelling aquatic insects, including mayflies, caddisflies, stoneflies, and midges (Wydoski and Whitney 1979).

Limiting Factors:
Stream temperatures which exceed the normal spawning range, a lack of spawning habitat, high sedimentation in spawning areas, and/or a lack of preferred food items will also limit the population and range of mountain whitefish.

Management Recommendations:
The maintenance of riparian vegetation is essential for controlling stream temperature, providing cover, and protecting against lateral erosion. Removal of streamside vegetation lowers canopy density (shading) and increases sedimentation. Increases in solar radiation raises stream temperatures thereby negatively impacting spawning, hatching, and rearing survival. Increased sedimentation contributes to the loss of spawning habitat and decreases the diversity of aquatic invertebrates and other food items (Newbold et al. 1980, Noss 1983, Heede 1985). Buffer zones along stream banks should be the width of the height of the tallest tree or 15.2 m (50 ft), whichever is wider. The vegetative buffer will provide erosion control, and maintain natural stream temperatures and diversity of aquatic invertebrates (Meehan et al. 1977, Newbold et al. 1980). In Washington, this can range up to 60 m (200 ft.). This "zone of influence" (Meehan et al. 1977) should be maintained along stream banks which provide mountain whitefish habitat, and any other stream which directly or indirectly influences mountain whitefish. Road construction and maintenance activities should be avoided adjacent to streams with mountain whitefish. In-stream structures such as bridges, piers, boat ramps, or culverts must not impede the natural movements

of mountain whitefish.

References:
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Key Points:
Habitat Requirements:
· Juvenile and adults inhabit stream pools and riffles in summer, and large pools in winter.
· Spawning habitat consists of gravel in stream riffles, and gravel shoals along lake shores.
· Newly hatched fry inhabit stream and lake shallows for a few weeks before migrating offshore.

Management Recommendations:
· Buffer zones of at least the width of the height of the tallest tree (or 15.2 m (50 ft), whichever is wider) should be maintained along stream and lake banks which provide mountain whitefish habitat, and any other stream which directly or indirectly influences mountain whitefish habitat.
· Road construction and maintenance activities should be avoided adjacent to streams which provide mountain whitefish habitat.
· In-stream structures such as bridges, piers, boat ramps, or culverts must not impede the natural movements of mountain whitefish.